

REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested.

Currently, claims 1-26 are pending in this application.

Request to Acknowledge Applicant's Claim for Foreign Priority and Receipt of

Priority Documents:

The present application claims priority from application no. EP 00302423.9 filed March 24, 2000. Applicant respectfully requests that the next Office Action acknowledge Applicant's claim for foreign priority under 35 U.S.C. §119 and receipt of the certified copy of the priority documents.

Unexamined Claims:

The Office Action fails to address claims 5 and 7. For example, section 4 of Form PTOL-326 states "Claim(s) 1-4, 6 and 8-13 is/are pending in the application." However, claims 5 and 7 are also pending in this application. For example, the Preliminary Amendment filed March 14, 2004 amends claims 5 and 7 so that each of these claims depends from claim 1. Applicant thus respectfully solicits a first examination on the merits of claims 5 and 7. The indication in the Office Action that claims 5 and 7 are no longer pending in this application is erroneous.

Rejections Under 35 U.S.C. §102 and §103:

Claims 10, 11 and 13 were rejected under 35 U.S.C. §102 as allegedly being anticipated by Ohtsuki et al (WO '835, hereinafter "Ohtsuki"). Claims 1-4, 6, 8-9 and 12

were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Ohtsuki.

Applicant respectfully traverses these rejections.

For a reference to anticipate a claim, each element must be found, either expressly or under principles of inherency, in the reference. Applicant respectfully submits that Ohtsuki fails to disclose each element of the claimed invention. For example, Ohtsuki fails to disclose "...each mode field radius transformer being arranged to increase the mode field radius of said optical signal, with respect to x, so that the power density of said optical signal in said mode field radius transformer is reduced to a level below the threshold required for optical power induced damage to propagate within the mode field transformer," as required by independent claim 10. Independent claims 1 and 11-13 also require reducing optical power density so that damage propagation is not supported.

Each of independent claims 1 and 10-13 is directed to the problem of *propagating* damage (i.e., traveling damage). In contrast, Ohtsuki (as discussed in U.S. Patent No. 6,590,698 which is believed to correspond to foreign language Ohtsuki WO '835) is concerned with *static* damage. In particular, Ohtsuki discloses reducing the likelihood of damage occurring at a predetermined point, namely at the output end of a fiber. For example, col. 22, lines 48-52 states "...the damage of the output end of the fiber due to the laser light can be suppressed. By combining the provision of the window member with the expansion of the diameter of the core, the damage of the output ends of the fibers which was serious problem in the conventional techniques can be prevented." There is no indication in Ohtsuki that damage is likely to propagate in the system or even along

the length of the disclosed fiber amplifier. Since Ohtsuki is not even remotely concerned with propagating damage, one of ordinary skill in the art would not have been motivated to consider Ohtsuki for solution to a problem associated with propagating damage.

Ohtsuki fails to appreciate the advantages of the present invention in reducing the risk of optical damage *propagation*. Ohtsuki therefore fails to teach or suggest all of the claimed limitations required by claims 1 and 10-13 and their respective dependents.

Dependent claim 3 further requires “wherein the section of optical fiber included in the mode transformer includes a waist portion, wherein the diameter or cross-sectional area of the waist portion is smaller than the diameter or cross-sectional area of the system fiber or pigtail fiber (emphasis added).” Ohtsuki fails to disclose or suggest this claimed feature. For example, col. 21, lines 65 *et seq.* state “In this case, the configuration of the taper is set so that expansion of the core diameter is increased sufficiently gently toward the output end face 423...(emphasis added).”

Independent claim 9 requires, *inter alia*, a fiber having a mode field transformer which has a mode field radius which is at least three times the normal mode field radius of the fiber. Ohtsuki fails to disclose or suggest any such a dimension. Indeed, there is nothing in Ohtsuki to suggest that any particular or specified increase in the dimensions of the mode field radius is even necessary since Ohtsuki is only concerned with reducing the likelihood of damage at the point where an expanded region is positioned. In contrast, the present invention addresses a concern directed to preventing damage from being propagated by a mode field transformer.

Accordingly, Applicant respectfully requests that the rejection of claims 1-4, 6 and 8-13 be withdrawn.

New Claims:

New claims 14-26 have been added to provide additional protection for the invention. Claims 14-21 depend at least indirectly from one of independent claims 1 or 9-13. Applicant therefore submits that these claims are allowable for at least the reasons discussed above with respect to their respective base independent claims. Claims 22-24 require, *inter alia*, a mode field radius transformer having a waist portion having a cross-sectional area which is smaller than the cross-sectional area of optical fiber portions. Claims 25-26 require, *inter alia*, a mode field radius transformer including a waist portion having a dimension so that an amount of optical power is leaked so that the optical power density of an optical signal is reduced below a threshold level required for propagation of optical power induced damage to occur. Accordingly, Applicant submits that claims 22-26 are allowable.

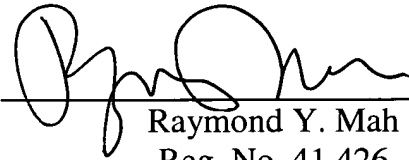
WYATT et al.
Application No.: 09/805,377
April 16, 2004

Conclusion:

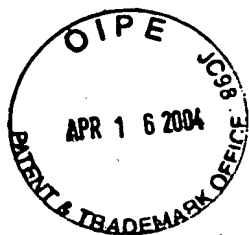
Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Raymond Y. Mah
Reg. No. 41,426

RYM:sl
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4044
Facsimile: (703) 816-4100



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Fig.1.

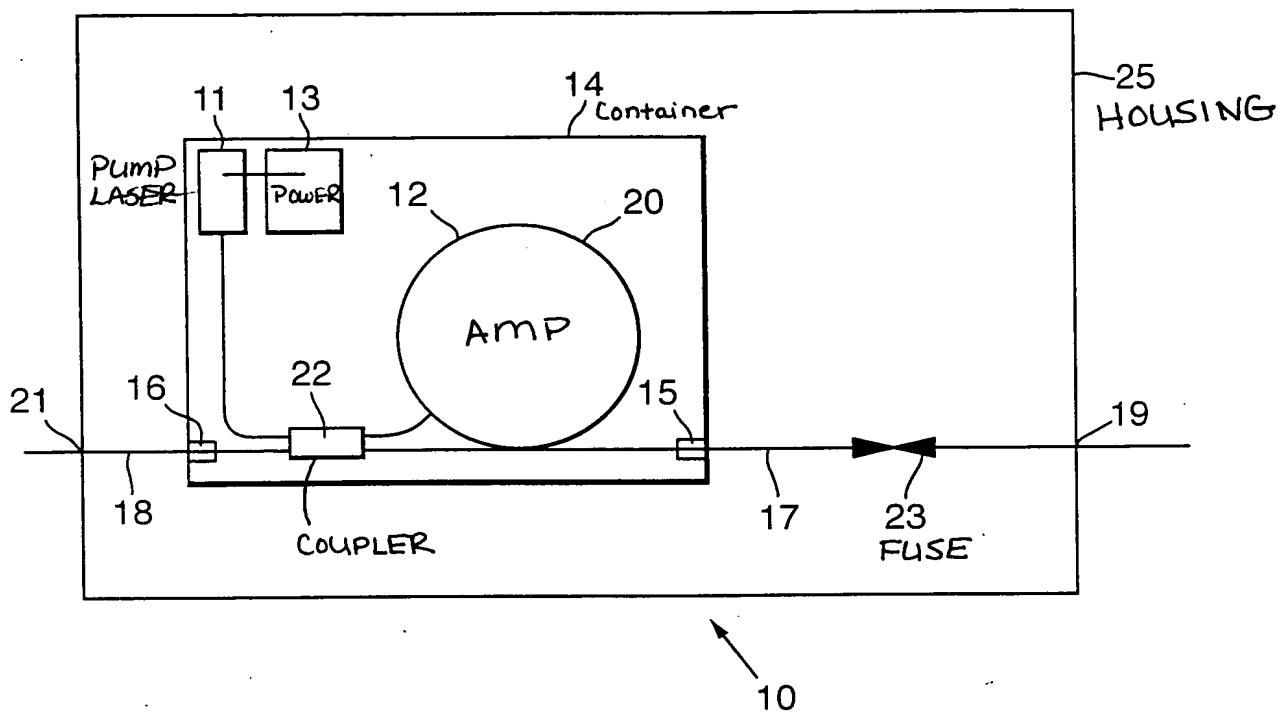
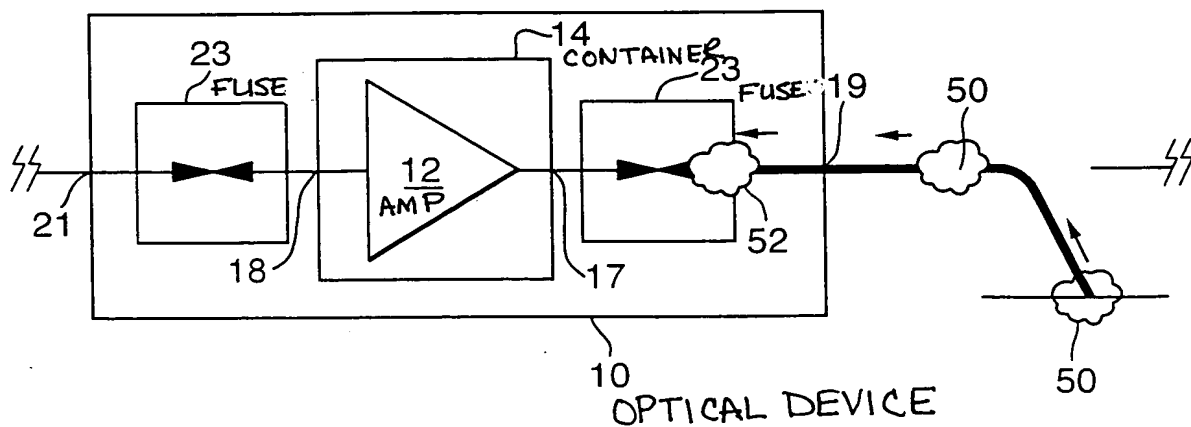


Fig.2.



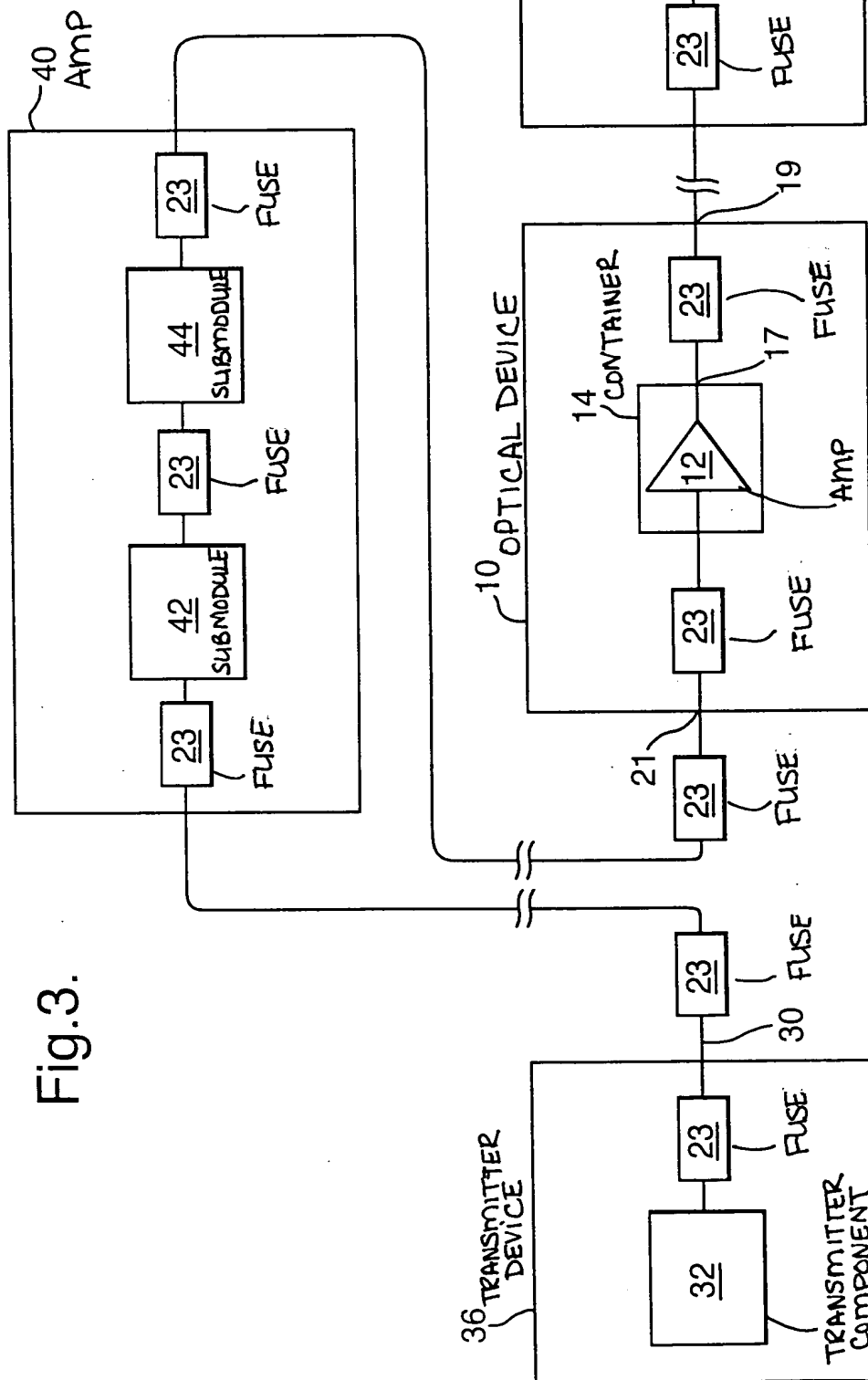


Fig.3.

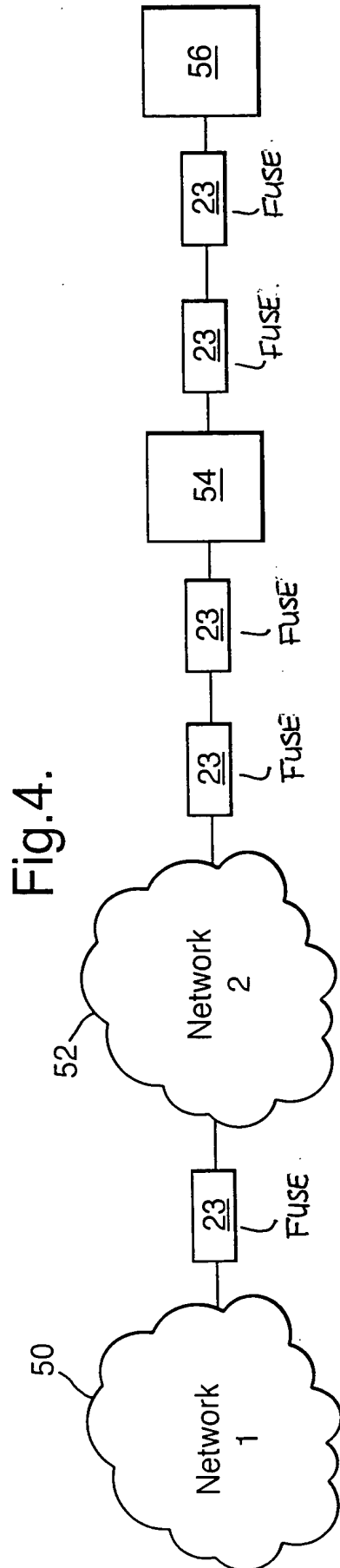


Fig. 6.

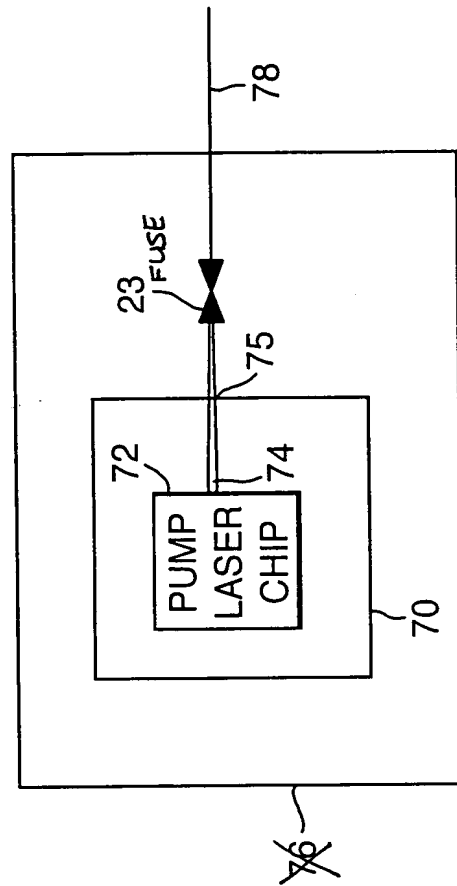


Fig. 5.

